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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,805	09/29/2003	Milton W. Demaray	HDS008	3676
25271 7590 04/06/2007 GALLAGHER & LATHROP, A PROFESSIONAL CORPORATION 601 CALIFORNIA ST SUITE 1111 SAN FRANCISCO, CA 94108			EXAMINER SUN, SCOTT C	
			ART UNIT 2182	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/674,805	DEMARAY ET AL.	
	Examiner	Art Unit	
	Scott Sun	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 12/11/2006 has been noted and entered. Previous grounds of rejection are withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1- have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-30 are rejected because the claims lack practical application.

Specifically, the claims are directed towards obtaining data and establishing data relationships. However, data and manipulation of data, per se, do not provide a useful, concrete, and tangible result. It is suggested that the claims include some practical application, such as using said copy-group identifier to recover data, as disclosed in the specification.

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5. To expedite a complete examination of the instant application, the claim(s) rejected under 35 USC 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Mimatsu et al (PG Pub # 2004/0111485).

8. Regarding claim 1, Mimatsu discloses in a system (figure 1) comprising a first computer (host computers 1101 paragraph 34) coupled to first and second storage devices (storage units 1405, 1406), the method comprising:

Cross-referencing a hardware address (LUN 3103, WWN 3102) identifying the first storage device and a first device identifier (device identifier 3106) for representing the first storage device to a program (disk volume management table shown in figure 3) in the first computer (paragraph 51, 53);

Cross-referencing a hardware address (LUN 3103, WWN 3102) identifying the second storage device and a first device identifier (device identifier 3106) for

representing the second storage device to a program (disk volume management table shown in figure 3) in the first computer (paragraph 51, 53);

Pairing the first and second storage devices (paragraph 57);

Grouping the pair in a copy group by information other than first device identifiers (virtual volume identifier 8103, 8104 used instead of device id; virtual volume identifiers are shown in first column of figure 3, as element 3101);

Identifying the copy group (saving the pair as API control block shown in figure 8, called func1 as example; paragraph 61);

Cross-referencing the copy-group identifier and the first device identifiers of the pair (device identifiers 14106 are then related copy pairs API 14107 as shown in figure 14; paragraph 77).

9. Regarding claim 2, Mimatsu discloses claim 1 and further discloses receiving a first input (mode select, mode sense instructions, paragraph 51) specifying one or more first device identifiers; obtaining one or more hardware addresses in response to the first input; and establishing the first map by associating the one or more hardware addresses with one or more first device identifiers (paragraph 51).

10. Regarding claim 3, Mimatsu discloses claim 2, and further discloses the first computer receives the first input and, in response, sends one or more commands (command 8101) to a respective controller (paragraph 46); the respective controller obtains at least some of the one or more hardware addresses in response to the one or more commands by interrogating either or both of control information in the respective controller and recording devices coupled to the respective controller, and sends the

obtained hardware addresses to the first computer; and the first computer establishes the first map (paragraphs 53).

11. Regarding claim 4, Mimatsu discloses claim 3, and further discloses the first computer comprises a channel subsystem (fibre channel interface 1102) that controls transfers of data between the first computer and one or more recording devices coupled to the respective controller; the first computer is coupled to the respective controller by a first data communication path (fibre channel cables 1314) that is a channel path coupled to the channel subsystem; the one or more commands are conveyed to the respective controller by a channel program comprising one or more channel command words generated by the channel subsystem; and hardware addresses obtained by the respective controller are conveyed to the first computer through the first data communication path as one or more responses to the channel program (paragraph 34).

12. Regarding claim 5, Mimatsu discloses claim 3 and further discloses, wherein the respective controller determines whether a respective recording device is capable of responding to a query command (inquiry command, paragraph 51) and returns the hardware address of the respective recording device only if the respective recording device is capable of responding to the query command. Examiner notes that if recording device does not respond to the inquiry command, it will not provide the information requested.

13. Regarding claim 6, Mimatsu discloses claim 1 and further discloses wherein each of the plurality of recording devices has a recording medium with a medium identifier that identifies the recording medium (device identifier 3106), and the first map also

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provides a cross-reference between medium identifiers and either or both of hardware addresses and first device identifiers for respective recording devices (figure 3), and wherein the method comprises: establishing the copy-group map also to provide a cross-reference between the copy-group identifier and the medium identifiers for the one or more pairs of recording devices assigned to the copy group (paragraph 50).

Examiner notes that Mimatsu teaches that identifiers (serial numbers) are also includes with the volume number entry.

14. Regarding claim 7, Mimatsu discloses claim 1 and further discloses, wherein the system comprises a second computer (computer 1201) coupled to one or more controllers of which at least one of the controllers is coupled to one or more recording devices that are in the one or more pairs of recording devices assigned to the copy group (figure 1), the method comprising: obtaining a second map that provides a cross-reference between the hardware address of the respective recording device and a second device identifier that is associated with the respective recording device, wherein the second device identifier represents the respective recording device to programs executing in the second computer; and establishing the copy-group map also to provide a cross-reference between the copy-group identifier and the second device identifiers of the one or more recording devices that are in the one or more pairs of recording devices assigned to the copy group (paragraphs 57; 58). Examiner notes that Mimatsu teaches that the volumes are used by both computers. Therefore the mappings are performed for both computers.

15. Regarding claim 8, Mimatsu discloses claim 7 and further discloses receiving a second input specifying one or more second device identifiers; obtaining one or more hardware addresses in response to the second input; and establishing the second map by associating the one or more hardware addresses with the one or more second device identifiers. Examiner notes that the claim state limitations similar to those of claim 2, except the functions are performed for the second computer. As cited above, the functions for both host computers are the same. Accordingly, the corresponding functions are also performed for the second computer.

16. Regarding claim 9, Mimatsu discloses claim 8 and further discloses wherein: the second computer receives the second input and, in response, sends one or more commands to a respective controller; the respective controller obtains at least some of the one or more hardware addresses in response to the one or more commands by interrogating either or both of control information in the respective controller and recording devices coupled to the respective controller, and sends these obtained hardware addresses to the second computer; and the second computer establishes the second map. Examiner notes that the claim state limitations similar to those of claim 3, except the functions are performed for the second computer. As cited above, the functions for both host computers are the same. Accordingly, the corresponding functions are also performed for the second computer.

17. Regarding claim 10, Mimatsu discloses claim 9 and further discloses: the second computer comprises a channel subsystem that controls transfers of data between the second computer and one or more recording devices coupled to the respective

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controller; the second computer is coupled to the respective controller by a second data communication path that is a channel path coupled to the channel subsystem; the one or more commands are conveyed to the respective controller by a channel program comprising one or more channel command words generated by the channel subsystem; and hardware addresses obtained by the respective controller are conveyed to the second computer through the second data communication path as one or more responses to the channel program. Examiner notes that the claim state limitations similar to those of claim 4, except the functions are performed for the second computer. As cited above, the functions for both host computers are the same. Accordingly, the corresponding functions are also performed for the second computer.

18. Regarding claims 11-30, examiner notes that the claims are substantially similar to claims 1-10, differing only in statutory category. The same grounds of rejection are applied.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Sun whose telephone number is (571) 272-2675. The examiner can normally be reached on M-F, 10:30am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS


KIM HUYNH
SUPERVISORY PATENT EXAMINER

4/2/07